

AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning on page 8, line 12 and ending on page 9, line 12, with the following paragraph:

B. The illustrated charging inductor 26 is selected to provide a time constant that allows a capacitor charge time that satisfies, i.e., is less than, the pulse rate of the laser 16. For the illustrated system, for example, the charge time is approximately equal to $\pi \sqrt{L * C}$. Two resistors, R1 28 and R2 30, are connected in parallel with the capacitor 12 in a commonly known voltage divider configuration. A keep-up power supply 32 is also connected in parallel with the capacitor 12, and in an embodiment, the keep-up power supply 32 is a high voltage power supply, although the invention is not limited by the keep-up power supply 32 specifications, and any similarly functioning element as described herein, may therefore be substituted without departing from the invention. The power supply system 10 also includes a control module 34 that operates S1 20, S2 22, S3 24, and controls the operation of the keep-up power supply 32, and the main power supply 18. Although ~~the~~ the illustrated control module 34 is not illustrated as microprocessor based, ~~however~~ those skilled in the art will recognize that the control processor may be a microprocessor based device, including for example, a personal computer (PC), SUN workstation, laptop or handheld computer including personal digital assistant (PDA), connected through a network or in a stand-alone capacity, and functioning as described herein, without departing from the scope of the invention. As FIG. 1 indicates, the control module 34 and the keep-up power supply 32 measure the voltage drop across R1 28. The remaining element of the power supply system 10 is a diode 36.